

### REMARKS

Claims 1 and 3-14 are pending in the application. The status of these claims is as follows:

Claims / Section	35 U.S.C. Sec.	References / Notes
1 & 3-14	§103(a) obviousness	<ul style="list-style-type: none"><li>Alexandrescu (U.S. Patent No. 5,909,497), and applicant's specification</li></ul>

5 Applicants have amended claims 1, 8, 10, 11, and 13, to include the limitation that the detected line signal is devoid of any information encoded specifically for the hearing aid device as well as an indication that an auditory situation of "display" is selected when the hearing aid device is in the presence of a powered display unit, and deselected when the hearing aid device is not in the  
10 presence of a powered display unit. Support for these amendments can be found in paragraphs [0010] through [0012] of the originally filed specification.

Applicants provide the following discussion for distinguishing over the art cited by the Examiner.

Applicants' use of reference characters below is for illustrative purposes  
15 only and is not intended to be limiting in nature unless explicitly indicated.

#### **35 U.S.C. §103(a), CLAIMS 1 AND 3-14 OBVIOUSNESS OVER ALEXANDRESCU IN VIEW OF APPLICANTS' SPECIFICATION**

*1. All independent claims have been amended to include the limitation that the detected line signal is devoid of any information specifically encoded for the hearing aid device. The device according to Alexandrescu could not operate  
20 without information specifically encoded for its device.*

In the OA, on pp. 2-5, the Examiner rejected the independent claims in the application as being obvious over Alexandrescu in view of Applicants' Specification, and followed the original comments made with a Response to Arguments section on p. 6.

5           The system disclosed by Alexandrescu, in pertinent part, is one in which a hearing device can detect a specifically encoded signal within a television signal and adjust the hearing aid parameters based on a decoded signal derived from the encoded signal. Alexandrescu states:

10           Another manner of programming the hearing instrument according to the invention would be to use a television signal, particularly one that is used for closed-captioning of television broadcasts. In this manner, the appropriate parameters or program for a television broadcast would be encoded into the  
15           television signal. Thus, for example, if the particular broadcast includes a loud noise, such as an explosion, the television signal includes, shortly before the explosion, program codes to modify the response parameters of the hearing instrument for this loud noise. Thus, the program codes are  
20           appropriately decoded to form part of the audio or electromagnetic signal for the hearing instrument and the hearing instrument is appropriately programmed for the upcoming loud noise, so as to minimize the discomfort a user may feel. [8/5-18]  
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The Examiner stated in the fourth paragraph of page 6:

30           Further, since the Applicant's claim language still does not stipulate the "line" signal must include/exclude any portion of the line signal outputted from the television, Alexandrescu applies.

Based on this comment, Applicants have amended all independent claims to include the limitation that the line signal is devoid of any information encoded specifically for the hearing aid device.

Thus, based on these amendments, the type of signal detected by the hearing device is materially different, the problem solved by the present invention is materially different from that solved by the disclosure of Alexandrescu, and the relevant devices are materially different.

5           First, the problem solved by the two devices is materially different. Alexandrescu's device reads a previously encoded signal designed specifically for the hearing device that has been choreographed for a particular television program. Therefore, e.g., in the event that a loud noise is about to occur, the volume can be adjusted down in the device based on an encoded instruction to  
10   lower the volume.

          In the present invention, the mere presence of a powered display device is the thing that causes the device to change its programming to a set of parameter settings more suitable for a television. Furthermore, Alexandrescu assumes that the hearing device user with his hearing device is already located in front of the  
15   activated television and the hearing device is already operated in a corresponding mode to receive the encoded signals. Only in this case does it make sense when the corresponding hearing device makes use of the auxiliary function specified in Alexandrescu. How the appertaining hearing device arrives at the "television" mode in Alexandrescu (manually or automatically) remains  
20   completely undisclosed in Alexandrescu. Alexandrescu presumes the very presence of the thing that the present invention seeks to detect.

          The present device would not solve a problem that could be solved by the device of Alexandrescu, e.g., lowering the volume in advance of an anticipated

loud noise. Conversely, the device of Alexandrescu would not solve a problem that could be solved by the present device, namely, how to detect a situation for adjusting parameters when information encoded specifically for the device is absent.

5           Second, the devices would further have to be constructed considerably differently, with the present invention being much simpler. In the device of Alexandrescu, circuitry for handling a previously agreed-to custom communications protocol would have to be included in the hearing device, increasing its size, cost, and power consumption (battery life reduction). The  
10   detection of known standard line signal frequencies can be implemented with much less circuitry and realized size, cost, and power consumption advantages over the device of Alexandrescu.

          Third and finally, the type of signal detected by the hearing device is materially different. As noted above, the device in Alexandrescu relies on a  
15   previously encoded and choreographed signal in order to detect and make necessary program changes. This requires significant effort and expense ahead of time, and renders the additions to the device useless in the absence of such a pre-encoded signal. It would take an enormous effort to embed and encode the required information. All films or transmissions would have to be checked for the  
20   purpose of determining whether critical acoustic situations for the hearing device user arise so that, in such cases, a type of "advance warning" for the hearing devices can be emitted. Both the television and the hearing device industry would have to agree on corresponding transmission standards so that a large number of users could make use of the specified possibility.

What Alexandrescu failed to realize is that one could adapt the hearing device to a situation in a more generalized and simplistic manner that did not require the continuous transmission of a specially encoded signal based on a characteristic of the content of the television signal or (regarding the disclosure at 5 8/35-48) require the presence of additional transmissions specifically designed for the hearing aid.

The present invention, by its recognition that an inherent characteristic of the display unit itself provided information sufficient to define a situation, is not simply an obvious variation of Alexandrescu. The present invention requires no 10 prior encoding step, no special adaptation of a signal that is broadcast, no agreement upon a protocol between the device and transmitter, and less complex circuitry.

The Examiner noted on p. 6, third paragraph, that Alexandrescu was not used to teach deflection of a line signal by an electron beam, but noted that upon 15 further review, the Applicants' specification (pages 2-3) teaches that an electron beam generated in an image tube deflecting a line signal is well known. The Examiner is correct in this characterization of the teaching of the Applicants' specification—however the fact that it is well known to deflect an electron beam in an image tube is not infer that it is would naturally follow to utilize a detection 20 of this characteristic in a hearing device to determine an auditory situation. While it may be obvious to use a world standard pertaining to a display device in a particular display, it is not obvious to use a display standard as a criteria for detection and adjustment of a hearing device regardless of how well known such

a standard is, when comparing with art that teaches a content-based analysis of the signal.

The line signal is unique in that it is well-bounded in frequency and immune to other types of noises that could cause the hearing aid to

5 mischaracterize its present situation. The inventors insightfully recognized the merits of using this particular signal such that further communications, circuitry, etc. would not be necessary.


For these reasons, Applicants assert that the amended claim language and the above arguments clearly distinguish over the prior art, and respectfully  
10 request that the Examiner withdraw the §103(a) rejection from the present application.

### CONCLUSION

Inasmuch as each of the rejections have been overcome by the amendments and arguments presented, and all of the examiner's suggestions  
15 and requirements have been satisfied, it is respectfully requested that the present application be reconsidered, the rejections be withdrawn and that this application be passed to issue.

Respectfully submitted,

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Appl. No. 10/636,048  
Reply to Office Action of September 28, 2006

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A handwritten signature in cursive script, appearing to read "Pam Anderson", is written over a horizontal line.